

Shoreline Inventory For Middlesex County 2015 - Shoreline Structures

Shapefile



Tags

Shoreline structures, Access structures, Land use, Land cover

Summary

To inventory the Middlesex County tidal shoreline conditions.

Description

Shoreline Situation Reports (SSR) were first generated by VIMS in the 1970s to report the condition and status of the shore lands. The SSR series were published in hardcopy on a county by county basis for each of the Tidewater Virginia localities. The reports were intended to assist planners, managers, and regulators in decisions pertaining to management of coastal areas and natural resources therein. This report continues the process which updates and expands earlier reports. Data collected describes conditions in the immediate riparian zone, the bank, and along the shore. Middlesex County was last inventoried in 2000.

Credits

There are no credits for this item.

Use limitations

The Comprehensive Coastal Inventory Program (CCI) at VIMS performs a service by distributing data generated by either CCI or public agencies which offer data without restriction or charge. CCI assumes no responsibility for data accuracy or precision, metadata completeness or correctness for digital information. CCI assumes no liability for misuse of any data which may arise as a result of any alteration, conversion, or combination with other data sources. As well, the timeliness and scale of these products must be considered when evaluating appropriate use.

Extent

West -76.683535 **East** -76.296970
North 37.775548 **South** 37.509709

Scale Range

Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:150,000,000

ArcGIS Metadata

Topics and Keywords

THEMES OR CATEGORIES OF THE RESOURCE boundaries, location, structure

* CONTENT TYPE Downloadable Data

PLACE KEYWORDS Virginia, Rappahannock River, Lagrange Creek, Urbana Creek, Piankatank River, Wilton Creek, Fishing Bay, Stingray Point

THEME KEYWORDS Shoreline condition, Shoreline structures, Land use, Shoreline Inventory, Bank cover, Shoreline stability, Bank height, Beach, Access structures

Citation

* TITLE Middlesex_sstru_2015
PUBLICATION DATE 2015-12-31 00:00:00

PRESENTATION FORMATS * digital map

Resource Details

DATASET LANGUAGES * English (UNITED STATES)

SPATIAL REPRESENTATION TYPE * vector

* PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.1.0.3035

ARCGIS ITEM PROPERTIES

* NAME Middlesex_sstru_2015
* SIZE 1.114
* LOCATION *****
* ACCESS PROTOCOL Local Area Network

Extents

EXTENT
GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT TYPE Extent used for searching
* WEST LONGITUDE -76.683535
* EAST LONGITUDE -76.296970

- * NORTH LATITUDE 37.775548
- * SOUTH LATITUDE 37.509709
- * EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

- * WEST LONGITUDE 351725.705300
- * EAST LONGITUDE 385380.340800
- * SOUTH LATITUDE 4152740.510300
- * NORTH LATITUDE 4181709.641600
- * EXTENT CONTAINS THE RESOURCE Yes

Resource Constraints

CONSTRAINTS

LIMITATIONS OF USE

The Comprehensive Coastal Inventory Program (CCI) at VIMS performs a service by distributing data generated by either CCI or public agencies which offer data without restriction or charge. CCI assumes no responsibility for data accuracy or precision, metadata completeness or correctness for digital information. CCI assumes no liability for misuse of any data which may arise as a result of any alteration, conversion, or combination with other data sources. As well, the timeliness and scale of these products must be considered when evaluating appropriate use.

LIMITATIONS OF USE

These data should not be used for jurisdictional permit determinations beyond providing general shoreline condition or status information. These data have not been surveyed to property boundaries

Spatial Reference

ARCGIS COORDINATE SYSTEM

- * TYPE Projected
- * GEOGRAPHIC COORDINATE REFERENCE GCS_North_American_1983
- * PROJECTION NAD_1983_UTM_Zone_18N
- * COORDINATE REFERENCE DETAILS

PROJECTED COORDINATE SYSTEM

WELL-KNOWN IDENTIFIER 26918

X ORIGIN -5120900
Y ORIGIN -9998100
XY SCALE 450445547.3910538
Z ORIGIN -100000
Z SCALE 10000
M ORIGIN -100000
M SCALE 10000
XY TOLERANCE 0.001
Z TOLERANCE 0.001
M TOLERANCE 0.001
HIGH PRECISION true
LATESTWKID 26918

WELL-KNOWN TEXT

PROJCS["NAD_1983_UTM_Zone_18N",GEOGCS["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenw

ich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Transverse_Mercator"],PARAMETER["False_Easting",500000.0],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",-75.0],PARAMETER["Scale_Factor",0.9996],PARAMETER["Latitude_Of_Origin",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",26918]]

REFERENCE SYSTEM IDENTIFIER

DIMENSION horizontal

* VALUE 26918

* CODESPACE EPSG

* VERSION 7.9.4

Spatial Data Properties

VECTOR

* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME Middlesex_sstru_2015

* OBJECT TYPE composite

* OBJECT COUNT 1529

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME Middlesex_sstru_2015

* FEATURE TYPE Simple

* GEOMETRY TYPE Polyline

* HAS TOPOLOGY FALSE

* FEATURE COUNT 1529

* SPATIAL INDEX TRUE

* LINEAR REFERENCING FALSE

Data Quality

SCOPE OF QUALITY INFORMATION

RESOURCE LEVEL dataset

Lineage

PROCESS STEP

DESCRIPTION All processing steps for the shoreline inventory were generated using ArcGIS - ArcMap v10.2.2 while viewing conditions observed in 2015 Bing high resolution oblique imagery and 2013 imagery from the Virginia Base Mapping Program (VBMP). Using the latest

VBMP 2013 imagery as a background, conditions visible on shore were used to code a digital shoreline created using VBMP 2013 imagery at a scale of 1:1000. Conditions were also verified using Bing Birds Eye, VBMP 2011, and VBMP 2009 imagery. For the land use/bank cover shapefile arcs were split and coded for land use, bank height, bank cover, tree fringe and presence or absence of beach, for the access structure shapefile arcs were coded for dock, dilapidated dock, boathouse, and public and private ramps, for the shoreline structure shapefile arcs were coded for bulkhead, dilapidated bulkhead, riprap, unconventional, debris, wharf, breakwater, groinfield, jetty, marsh toe revetment and marina >50 and <50 slips.

SOURCE DATA

DESCRIPTION Provided the latest 2013 imagery used to produce a new digital shoreline coverage that serves as the base shoreline for shoreline conditions. Used to accurately position land use and land cover data.

SOURCE CITATION

TITLE Virginia Base Map Program Imagery and Hydrology

ALTERNATE TITLES VBMP

COLLECTION TITLE Geographic Network Division of its Department of Technology Planning (VGIN)

PROCESS STEP

DESCRIPTION The first step in the QAQC process involves complete checks of shoreline coding by a GIS Programmer/Analyst and a Marine Scientist

PROCESS STEP

DESCRIPTION The second and third step in the QAQC process involves complete checks of shoreline coding by a GIS Programmer/Analyst and a Marine Scientist using the Red Hen video.

Distribution

DISTRIBUTOR

CONTACT INFORMATION

INDIVIDUAL'S NAME Marcia Berman

ORGANIZATION'S NAME Center for Coastal Resources Management, Virginia Institute of Marine Science (VIMS)

CONTACT'S POSITION Director Comprehensive Coastal Inventory Program

CONTACT'S ROLE point of contact

DISTRIBUTION FORMAT

VERSION Shapefile

* NAME Shapefile

TRANSFER OPTIONS

* TRANSFER SIZE 1.114

Fields

DETAILS FOR OBJECT Middlesex_sstru_2015

* TYPE Feature Class

* ROW COUNT 1529

FIELD FID

* ALIAS FID

* DATA TYPE OID

* WIDTH 4

* PRECISION 0

* SCALE 0

* FIELD DESCRIPTION

Internal feature number.

* DESCRIPTION SOURCE

Esri

* DESCRIPTION OF VALUES Sequential unique whole numbers that are automatically generated.

FIELD Shape

* ALIAS Shape

* DATA TYPE Geometry

* WIDTH 0

* PRECISION 0

* SCALE 0

* FIELD DESCRIPTION

Feature geometry.

* DESCRIPTION SOURCE

Esri

* DESCRIPTION OF VALUES Coordinates defining the features.

FIELD shoreType

- * ALIAS shoreType
- * DATA TYPE String
- * WIDTH 254
- * PRECISION 0
- * SCALE 0

FIELD Inv_Update

- * ALIAS Inv_Update
- * DATA TYPE String
- * WIDTH 150
- * PRECISION 0
- * SCALE 0

FIELD STRUCTURE

- * ALIAS STRUCTURE
- * DATA TYPE String
- * WIDTH 50
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Erosion control conditions at the shoreline: breakwater, bulkhead, dilapidated bulkhead, debris, groinfield, jetty, marina >50 slips, marina <50 slips, marsh toe revetment, riprap, unconventional and wharf.

DESCRIPTION SOURCE

Processor

LIST OF VALUES

VALUE Bulkhead

DESCRIPTION Bulkheads are traditionally treated wood or steel "walls" constructed to offer protection from wave attack. More recently, plastics are being used in the construction. Bulkheads are vertical structures built slightly seaward of the problem area and backfilled with suitable fill material. They function like a retaining wall, as they are designed to retain upland soil, and prevent erosion of the bank from impinging waves.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Breakwater

DESCRIPTION Breakwaters are structures that sit offshore and generally occur in a parallel series along the shore. Some breakwaters are attached to the land and are referred to as headland breakwaters. Their purpose is to attenuate and deflect incoming wave energy, protecting the fastland behind and between the structures.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Debris

DESCRIPTION Debris represents nonconforming materials and rubble dumped along the shoreline in a haphazard manner. Debris can include tires, bricks, broken concrete rubble, and railroad ties as examples. The inventory maps Unconventional instead of Debris when the material is deliberately placed for shoreline protection in a manner similar to riprap, bulkhead, and other shoreline protection structures.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Dilapidated Bulkhead

DESCRIPTION Dilapidated Bulkhead – A bulkhead which has failed due to deterioration from age or storm damage is called a dilapidated bulkhead. In many cases the structure may not be able to perform erosion control functions any longer.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Groinfield

DESCRIPTION Groins are low profile structures that sit perpendicular to the shore. They can be constructed of rock, timber, or concrete. They are frequently set in a series known as a groinfield, which may extend along a stretch of shoreline for some distance. Unless only a single groin can be detected, this inventory does not delineate individual groins in a groinfield. The groinfield is mapped as one linear feature parallel to the shoreline running along the length of the groin series. When effective, groins will trap sediment moving alongshore.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Jetty

DESCRIPTION jetty is a structure generally constructed of stone which is perpendicular to the shoreline and generally located at the entrance of tidal creeks and tributaries or marina boat basins. The function of a jetty is to prevent sediment transported alongshore from accumulating in the inlet.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Marinas: < and > 50 slips

DESCRIPTION Marinas are denoted as line features in this survey. The infrastructure associated with the marina (e.g. bulkheading, docks, wharfs, etc) are not digitized individually. However, if a boat ramp is noted it will be surveyed separately and coded as private. Marinas are generally commercial operations. However, smaller scale community docks offering slips and launches for residences are becoming more popular. To distinguish these facilities from commercial marinas, the user could check the riparian land use delineation. If “residential” the marina is most likely a community facility. The survey estimates the number of slips within the marina and classifies marinas as those with less than 50 slips and those with more than 50 slips.

ENUMERATED DOMAIN VALUE DEFINITION SOURCE Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Marsh Toe Revetment

DESCRIPTION (aka Marsh sill) – A low revetment placed offshore from an existing marsh or new planted marsh is classified as marsh toe revetment. The structure may include tidal

openings to allow for the easy exchange of free swimming organisms during tidal cycles. Marsh toe revetments are mapped as offshore linear features running along the length of the structure. Marsh toe revetments are distinguished from breakwaters by the linear placement and presence of a tidal marsh instead of a sand beach landward from the structure. The classification can include best professional judgment.

[ENUMERATED DOMAIN VALUE DEFINITION SOURCE](#) Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Riprap

[DESCRIPTION](#) aka Revetments) - Sloped structures constructed with large, heavy stone or other materials placed against the upland bank for erosion protection are classified as riprap. Riprap is mapped as a linear feature along the shoreline. Riprap is also used next to failing bulkheads (bulkhead toe revetments). The inventory maps only riprap when this type of structure is co-located with bulkheads. A similar structure is used to protect the edge of eroding marshes. This use is mapped as marsh toe revetment, not riprap.

[ENUMERATED DOMAIN VALUE DEFINITION SOURCE](#) Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Unconventional

[DESCRIPTION](#) Unconventional features represent segments along the shore where alternative material has been deliberately placed for shoreline protection. Unconventional features may include unique materials placed in a similar manner as riprap or bulkheads, such as engineered pre-cast concrete products. It may also include unique placement or arrangement of conventional materials like riprap that does not fit other structure definitions. The inventory maps Debris instead of Unconventional when the material is haphazardly scattered and not providing any shoreline protection value.

[ENUMERATED DOMAIN VALUE DEFINITION SOURCE](#) Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

VALUE Wharf

[DESCRIPTION](#) Typically describes a shore parallel structure where boats are tied. In this inventory, Wharf is generally associated with large industrial, public or commercial facilities.

[ENUMERATED DOMAIN VALUE DEFINITION SOURCE](#) Glossary of Shoreline Features Defined, Center for Coastal Resources Management, VIMS

Metadata Details

* [METADATA LANGUAGE](#) English (UNITED STATES)

* [METADATA CHARACTER SET](#) utf8 - 8 bit UCS Transfer Format

[SCOPE OF THE DATA DESCRIBED BY THE METADATA](#) * dataset

[SCOPE NAME](#) * dataset

* [LAST UPDATE](#) 2015-12-14

[ARCGIS METADATA PROPERTIES](#)

[METADATA FORMAT](#) ArcGIS 1.0

[METADATA STYLE](#) ISO 19139 Metadata Implementation Specification

CREATED IN ARCGIS FOR THE ITEM 2015-12-14 11:27:51
LAST MODIFIED IN ARCGIS FOR THE ITEM 2015-12-14 11:29:25

AUTOMATIC UPDATES
HAVE BEEN PERFORMED Yes
LAST UPDATE 2015-12-14 11:29:25

Metadata Contacts

METADATA CONTACT
INDIVIDUAL'S NAME Sharon Killeen
ORGANIZATION'S NAME Comprehensive Coastal Inventory, Virginia Institute of Marine Science (VIMS)
CONTACT'S POSITION GIS Programmer/Analyst
CONTACT'S ROLE point of contact